

Annual Drinking Water Quality Report for 2019
Stockbridge Water District
P.O. Box 95, Munnsville, New York 13409
Public Water Supply ID# NY2602379

INTRODUCTION

To comply with State regulations, Stockbridge Water District, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact Alex Stepanski, Town Supervisor, at 315-495-6752, or James Chamberlain, Water Superintendent at 315-264-3617. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled village board meetings. The meetings are held the first Monday of each month.

WHERE DOES OUR WATER COME FROM?

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Our water system serves approximately 1093 individuals through 724 service connections. The Stockbridge Water District purchases 100% of its water from the City of Oneida.

WATER SUPPLY

The City of Oneida starts with a high quality surface water source from Glenmore Reservoir on Florence Creek, which is located twenty miles north of the City in the Town of Annsville, Oneida County. The dam impounds water from a 13.8 square mile watershed on the edge of the Tug Hill Plateau. The watershed is mainly forestlands with approximately half being State Reforestation. The 378-foot long and 45-foot high dam, constructed in 1926 in this rural location, provides water storage to buffer seasonal water demands as well as dry weather supply. The reservoir holds 299 million gallons of water. The City owns the 500-acre site on which the reservoir and dam are located. Last year, our system did not experience any restriction of our water source.

WATER TREATMENT

The City of Oneida reservoir and watershed receive regular inspections. While no contamination has been observed, treatment is required to ensure safe water is entering the distribution system. Situated one-half mile downstream from the dam is the City's Water Treatment Plant. This conventional flocculation/sedimentation facility with a production capacity of 4 million gallons a day (4 MGD) was completed in 1980. The plant includes a rapid mix basin, flocculation facilities, (2) contact basins, (4) dual media filters, and a clear-well tank. After the process of chemical addition, contact and filtration- microorganisms, including some that can cause disease (pathogens) may still be found in filtered water. Chlorination equipment is utilized to provide sufficient chlorine to kill any pathogens that may be present and to provide a

chlorine residual in the water entering the distribution system. In order to inhibit corrosion of our distribution pipes we introduce zinc orthophosphate into the distribution system. This compound provides a thin protective coating to our pipes. Grade 1A and IIA operators operate the plant, 365 days a year. An onsite laboratory is utilized by personnel for chemical testing for daily operation of the plant.

At the Stockbridge Middle Road Pump Station, additional chlorine in the form of liquid sodium hypochlorite is added to the water to maintain sufficient chlorine to kill any pathogens that may be present and to provide a chlorine residual in the water entering the Stockbridge Water District distribution system.

SOURCE WATER ASSESSMENT

The New York State Department of Health (NYSDOH) has evaluated Glenmore Reservoir's susceptibility to contamination under the Source Water Assessment Program (SWAP), and their findings are summarized in the paragraph below. It is important to stress that these assessments were created using available information and only estimate the potential for source water contamination. Elevated susceptibility ratings do not mean that source water contamination has or will occur for this public water system (PWS). This PWS provides treatment and regular monitoring to ensure the water delivered to consumers meets all applicable drinking water standards.

The assessment area for this drinking water source contains no discrete potential contaminant sources, and only the protozoa land covers contaminate prevalence ratings is greater than low. This rating is attributed to the percentage of pasture land cover used in the analysis, without regard for the actual percentage of such pasture land actively being used for agricultural livestock. This results in this reservoir being assigned a high susceptibility to protozoa, despite the relative absence of such land actually being used for livestock purposes within the watershed. However, the high mobility of microbial contaminants in all such reservoirs results in this drinking water intake being assigned medium – high susceptibility ratings for enteric bacteria and viruses. Furthermore, all open reservoirs are deemed highly susceptible to water quality problems caused by phosphorus additions.

ARE THERE CONTAMINANTS IN OUR DRINKING WATER?

As the State regulations require, we and the City of Oneida routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, haloacetic acids, radiological and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791) or the Madison County Health Department at 315-366-2526.

Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average/Maximum) (Range)	Unit of Measurement	MCLG/ MRDLG	Regulatory Limit (MCL, MRDL, MRDLG, TT or AL)	Likely Source of Contamination
Source Water from Glenmore Reservoir							
Total Organic Carbon	No	Monthly	4.1 ² 2.3-6.0	mg/L	N/A	TT	Naturally present in the environment
Finished Water							
Turbidity (EP) ¹	No	Daily	0.06 ² .04-.13	NTU	N/A	TT < 1.0 NTU	Soil Runoff

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Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average/Maximum) (Range)	Unit of Measurement	MCLG/ MRDLG	Regulatory Limit (MCL, MRDL, MRDLG, TT or AL)	Likely Source of Contamination
Turbidity (EP) ¹	No	Daily	100 %	NTU	N/A	TT = 95% of samples < 0.3 NTU	Soil Runoff
Total Organic Carbon	No	Monthly	1.3 ² <1.0-1.9	mg/L	N/A	TT	Naturally present in the environment
Inorganics							
pH	No	Continuous	6.9– 7.3	Std. Units	N/A	N/A	Naturally occurring
Calcium	No	-	-	mg/L	N/A	N/A	Naturally occurring
Nitrate	No	3/7/2019	0.24	mg/l	10	MCL=10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Copper (EP)	No	6/13/2019	41.3	µg/L	1,300	AL = 1,300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Magnesium	No	6/13/2019	2,200	µg/L	N/A	N/A	Naturally occurring
Sodium	No	6/13/2019	7.65	mg/L	N/A	(see health effects) ⁶	Naturally occurring; Road salt.
Copper	No	6-8/2018	41.3 ³ 7-234	µg/L	1,300	AL = 1,300	Corrosion of household plumbing systems; Erosion of natural deposits; leaching from wood preservatives.
Lead	No	6-8/2018	3.0 ⁴ ND- 6.4	µg/L	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits.
Chloride	No	6/13/2019	2.1	mg/L	N/A	MCL = 250	Naturally occurring or indicative of road salt contamination.
Zinc	No	6/13/2019	0.23	mg/L	N/A	MCL = 5	Naturally occurring; Mining waste.
Sulfate	No	6/13/2019	16.9	mg/L	N/A	MCL = 250	Naturally occurring
Barium	No	6/13/2019	7.5	µg/L	2,000	MCL = 2,000	Erosion of natural deposits.
Bromodichloromethane	No	6/13/2019	9.3	µg/L	0	MCL = 80 ⁷	By-product of drinking water disinfection needed to kill harmful organisms.
Chloroform	No	6/13/2019	18.3	µg/L	0.7	MCL = 80 ⁷	By-product of drinking water disinfection needed to kill harmful organisms.
Alkalinity as CaCO ₃	No	6/13/2019	25.7	mg/L	N/A	N/A	Naturally occurring
Hardness, Calcium as CaCO ₃	No	6/13/2019	26.7	mg/L	N/A	N/A	Naturally occurring
Total Dissolved Solids	No	6/13/2019	54	mg/L	N/A	N/A	Naturally occurring
Disinfectants							
Chlorine Residual	No	Continuous	1.0 ⁵ 0.8-1.5	mg/L	N/A	MRDL = 4	Water additive used to control microbes.

In the table above, you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Action Level (AL) - The concentration of a contaminant, which, if exceeded, triggers treatment, or other requirements, which a water system must follow.

Entry Point (EP) - A representative sampling location after the last point of treatment but before the first consumer connection

Haloacetic Acids (HAA5): mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as possible.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Milligrams per liter (mg/l) – corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

N/A – Not Applicable

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per billion (ppb) or Micrograms per liter (ug/l) - one part per billion corresponds to one part of liquid in one billion parts of liquid.

Total Trihalomethanes (TTHMs) – chloroform, bromodichloromethane, dibromochloromethane and bromoform

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.

Notes:

1 – Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Our highest single turbidity measurement for the year occurred on 9/3/2019 (0.13 NTU). State regulations require that turbidity must always be below 5 NTU which were met during the year. The regulations require that 95% of the turbidity samples collected have measurements below 0.5 NTU. Of all samples collected in 2019, 100% were measured at less than 0.5 NTU.

2 – This level represents the annual average and range of values calculated from sample results.

3 – The level presented represents the 90th percentile of the 30 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the copper values detected at your water system. In this case, thirty samples were collected at your water system and the 90th percentile value was the twenty seventh highest value (186 µg/L). The action level for copper was not exceeded at any of the sites tested.

4 – The level presented represents the 90th percentile of the 30 sites tested. The action level for lead was not exceeded at any of the sites tested.

5 – This level represents the annual average calculated from the clearwell outlet.

6 – Water containing more than 20mg/L of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270mg/L of sodium should not be used for drinking by people with moderately restricted sodium diets.

7 – This MCL represents the MCL for Total Trihalomethanes. This contaminate contributes to the calculation of Total Trihalomethanes

Sources of drinking water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants.

In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Departments and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Unregulated Contaminant Monitoring

The 1996 Safe Drinking Water Act (SDWA) amendments require that once every five years EPA issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs). Unregulated contaminants are those that don't yet have a drinking water standard set by US Environmental Protection Agency. The purpose of monitoring for these contaminants is to help US EPA decide whether the contaminants should have a standard. The fourth Unregulated

Contaminant Monitoring Rule (UCMR 4) was published in the Federal Register on December 20, 2016. UCMR 4 requires monitoring for 30 chemical contaminants between 2018 and 2020 using analytical methods developed by EPA and consensus organizations. This monitoring provides a basis for future regulatory actions to protect public health. In 2019 testing, none of the cyanotoxins, pesticides, germanium, alcohols, or other semivolatile chemicals were detected. However, manganese and several species of disinfection by-products were detected.

Table of Detected Contaminants - The Fourth Unregulated Contaminant Monitoring Rule (UCMR4)					
Contaminant	Date of Sample	Level Detected (Average)/ (Range)	Unit of Measurement	MRL ¹	Use or Environmental Source
Manganese	4 Quarters	18.7 (4.8 – 52.0)	µg/L	0.4	Naturally occurring.
HAA5 ²	4 Quarters	23.3 (0.7 – 55.3)	µg/L	N/A	By-product of drinking water disinfection needed to kill harmful organisms.
HAA6Br ³	4 Quarters	0.7 (0.0 - 2.8)	µg/L	N/A	By-product of drinking water disinfection needed to kill harmful organisms.
HAA9 ⁴	4 Quarters	23.9 (0.7 – 58.1)	µg/L	N/A	By-product of drinking water disinfection needed to kill harmful organisms.

Notes:

1 - MRL - Minimum Reporting Level

2 - HAA5 includes: dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, trichloroacetic acid.

3 - HAA6Br includes: bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, dibromochloroacetic acid, monobromoacetic acid, tribromoacetic acid.

4 - HAA9 includes: bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, trichloroacetic acid.

Entry Point (EP001) - A representative sampling location after the last point of treatment but before the first consumer connection

DBPMAX - Maximum residence time in the distribution system

MRL - Minimum Reporting Level

Stockbridge WD Table of Detected Contaminants							
Contaminant	Violation Yes/No	Date of Sample	Level Detected (Average/ Maximum) (Range)	Unit of Measurement	MCLG/ MRDLG	Regulatory Limit (MCL, MRDL, MRDLG, TT or AL)	Likely Source of Contamination
Microbiological Contaminants - Sample Monthly							
Chlorine Residual	No	Daily / Monthly	0.9 ⁽¹⁾ (range = 0.1 – 2.1)	mg/L	N/A	MRDL = 4 ⁽²⁾	Water additive used to control microbes.
Total Coliform	No	10/15/19	1 positive sample ⁽³⁾	n/a	0	MCL= 2 or more positive samples	Naturally present in the environment
Total Coliform	Yes	8/6/19, 8/8/19	4 positive samples ⁽⁴⁾	n/a	0	MCL= 2 or more positive samples	Naturally present in the environment
E. Coli	Yes	8/6/19	1 positive sample ⁽⁵⁾	n/a	0	MCL= 1 or more positive samples	Naturally present in the environment
Disinfection By products - Stage 2							
Stage 2 - Total Trihalomethanes (TTHMs) ⁶ (Stockbridge)	No	3,6,9,12/ 2019	73.5 ⁽⁸⁾ 22.7 - 101.0	µg/L	N/A	MCL = 80	By-product of drinking water disinfection needed to kill harmful organisms.
Stage 2 - Haloacetic Acids (HAA5) ⁷ (Stockbridge)	No		34.1 ⁽⁸⁾ 23.0 – 48.4		N/A	MCL = 60	
See City of Oneida AWQR for additional sample information - Physical Parameters, Radioactive Contaminants, Inorganic Contaminants, Synthetic Organic Contaminants, Principal Organic Contaminants, Lead and Copper							

- Notes:
- 1 – The levels presented represent the average and range of the levels reported on the microbiological sampling reports.
 - 2 – Value presented represents the Maximum Residual Disinfectant Level (MRDL) which is a level of disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. MRDLs are currently not regulated but in the future they will be enforceable in the same manner as MCLs.
 - 3 – Repeat follow-up sampling was conducted on 10/17/19 and these samples did not detect Total Coliform, therefore MCL or TT were not triggered.
 - 4 – A positive sample was detected on 8/6/19, follow up samples on 8/8/19 detected Total Coliform, triggering an MCL Violation. Expanded sampling on 8/9/19 and 8/10/19 did not detect Total Coliform.
 - 5 – One positive sample was detected on 8/6/19, triggering an MCL Violation. Repeat samples did not detect E. Coli.
 - 6 – TTHMs – chloroform, bromodichloromethane, dibromochloromethane and bromoform
 - 7 – HAA5 – mono-, di-, and trichloroacetic acid, and mono- and dibromoacetic acid
 - 8 – This level represents the highest Locational Running Annual Average (LRAA) and range of all sample results. Compliance with the MCL for Disinfection Byproducts is based upon the Locational Running Annual Average of all samples collected during four consecutive quarters. Individual samples may have exceeded the MCL but our system's LRAA never exceeded the MCL.

What does this information mean?

Coliform bacteria are rarely harmful to humans and are typically destroyed by residual chlorine. Under certain conditions coliforms can survive in drinking water. We had a total coliform positive repeat sample following an E. coli positive routine sample. (Our system had a positive E. coli sample in August 2019 and total coliform positive samples in August, 2019 and October 2019). Initial repeat samples collected on August 8, 2019 were positive for total coliform and a Notice of Violation was issued to us. After increasing the free chlorine residual in our water system, routine follow up testing per our sampling plan was conducted and no coliforms were detected at the original sampling location, or upstream or downstream. E. coli was not found in any of the repeat samples collected in August 2019 or October 2019.

Is our water system meeting other rules that govern operations?

During 2019, our system was in compliance with applicable State drinking water operating, monitoring and reporting requirements. We received a Notice of Violation for Exceeding the MCL for E. coli in August, 2019. We found E. coli bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments. We were required to complete a Level 2 assessment because we found E. coli in our water system. In addition, we were required to take a corrective action (increasing our free chlorine residual) and we completed the corrective action and the level 2 assessment.

CRYPTOSPORIDIOSIS AND GIARDIASIS

New York State law requires water suppliers to notify their customers about the risks of cryptosporidiosis and giardiasis. Cryptosporidiosis and giardiasis are intestinal illnesses caused by microscopic parasites. Cryptosporidiosis can be very serious for people with weak immune systems, such as chemotherapy, dialysis or transplant patients, and people with Crohn's disease or HIV infection. People with weakened immune systems should discuss with their health care providers the need to take extra precautions such as boiling water, using certified bottle water or a specially approved home filter. Individuals who think they may have cryptosporidiosis or giardiasis should contact their health care provider immediately. For additional information on cryptosporidiosis and giardiasis, please contact Madison County Health Department @ 315-366-2526.

GIARDIA

Giardia is a microbial pathogen present in varying concentrations in many surface waters and groundwater under the influence of surface water. Giardia is removed/inactivated through a combination of filtration and disinfection or by disinfection. During 2009, as part of the City of Oneida's routine sampling, 12 samples of Glenmore Reservoir source water were collected and analyzed for Giardia cysts. Of these samples, one was confirmed positive. Therefore, our testing indicates the presence of Giardia in our source water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Giardia may cause giardiasis, an intestinal illness. People exposed to Giardia may experience mild or severe diarrhea, or in some instances no symptoms at all. Fever is rarely present. Occasionally, some individuals will have chronic diarrhea over several weeks or a month, with significant weight loss. Giardiasis can be treated with anti-parasitic medication. Individuals with weakened immune systems should consult with their health care providers about what steps would best reduce their risks of becoming infected with Giardiasis. Individuals who think that they may have been exposed to Giardiasis should contact their health care providers immediately. The Giardia parasite is passed in the feces of an infected person or animal and may contaminate water or food. Person to person transmission may also occur in day care centers or other settings where hand washing practices are poor.

DO I NEED TO TAKE SPECIAL PRECAUTIONS?

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water.

EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

WATER RATES

Residential Customers	
First 8,000 gallons.	\$48.00
Over 8,000 gallons	\$6.00 per 1000 gallons

WHY SAVE WATER AND HOW TO AVOID WASTING IT?

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential firefighting needs are met.

Closing

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. Please call the Stockbridge Water Superintendent if you have questions at 315-264-3617 or the Madison County Health Department at 315-366-2526.

See Attached City of Oneida Report for additional required reporting, sampling, treatment